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10/786,512	02/24/2004	Yukihisa Nakajo	393032043800	2773

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EXAMINER

ALUNKAL, THOMAS D

ART UNIT	PAPER NUMBER
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2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/786,512	Applicant(s) NAKAJO, YUKIHISA	
	Examiner THOMAS D. ALUNKAL	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 15-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 3/23/09 have been fully considered but they are not persuasive.

Regarding applicant's arguments beginning on page 20 of Remarks, the applicant argues that Nakajo (US 5,485,449) does not disclose all of the claimed limitations of amended claim 8. The applicant argues that Nakajo does not disclose the amended features of cancelled claims 11 and 12. Specifically, the applicant argues that "Nakajo may provide different modulations and laser power for different recording rates but, for a given recording rate, it does not provide the recited strategies for the recording modes as claimed." The Examiner respectfully disagrees. Specifically, Figures 6 and 9, which represent the normal and alternative recording modes, respectively, of Nakajo disclose that for a given recording speed multiplying factor (i.e., x1, x2, and x4), various "modulation" methods are applicable. Therefore, Nakajo does disclose the recited strategies for the recording modes as claimed. New claims 49-51 will be addressed below.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8-10 and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajo (US 5,485,449).

Regarding claim 8, Nakajo discloses an optical disk recording method (see Title) of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length only recording scheme (Figure 14 and Column 6, lines 13-65), the method comprising the steps of: providing a plurality of strategies which are selectable according to a model of the optical disk (Table 1 and Figure 4), the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit (Column 5, lines 43-53); providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity (Figures 7A, 7B, and Column 4, line 66-Column 5, line 10), the first strategy being designed to shorten the pulse width of the laser drive signal and increase the power of the laser beam as compared to the second strategy (Figure 7A), the second strategy being designed to lengthen the pulse width of the laser drive signal and decrease the power of the laser beam as compared to the first strategy (Figure 7B), each strategy being such as to create signals of the same pit length as those that would have been created by the other strategy (Figures 7A, 7B, and Column 4, line 66-Column 5, line 10 where the pit lengths are equal); and using changeably both of the first strategy and the second

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strategy dependently on conditions of the recording of information (Column 5, lines 30-42 where the widths of the pits are changed in order to compensate for crosstalk and jitter), wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information (Column 2, lines 33-48, Column 5, lines 30-42, 63-66, and Figures 6 and 9), and wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode (Column 2, lines 33-48, Column 5, lines 30-42, 63-66, and Figures 6 and 9).

Regarding claim 9, Nakajo discloses where the step of providing a first strategy and a second strategy provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time (Column 3, lines 49-65 and Column 7, lines 25-28 where multiple formatted disks are applicable).

Regarding claim 10, Nakajo discloses wherein the step of providing a first strategy and a second strategy provides both versions of the first strategy and the

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second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value (Column 3, lines 49-65 and Column 7, lines 25-28 where multiple formatted disks are applicable).

Regarding claim 49, Nakajo an optical disk recording method (see Title) of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length only recording scheme (Figure 14 and Column 6, lines 13-65), the method comprising the steps of: providing a plurality of strategies which are selectable according to a model of the optical disk (Table 1 and Figure 4), the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit (Column 5, lines 43-53); providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity (Figures 7A, 7B, and Column 4, line 66-Column 5, line 10), the first strategy being designed to shorten the pulse width of the laser drive signal and increase the power of the laser beam as compared to the second strategy (Figure 7A), the second strategy being designed to lengthen the pulse width of the laser drive signal and decrease the power of the laser beam as compared to the first strategy (Figure 7B), each strategy being such as to create signals of the same pit length as those that would have been created by the other strategy (Figures 7A, 7B, and Column 4, line 66-Column 5, line 10 where the pit

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lengths are equal); and using changeably both of the first strategy and the second strategy dependently on conditions of the recording of information (Column 5, lines 30-42 where the widths of the pits are changed in order to compensate for crosstalk and jitter), wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information (Column 2, lines 33-48, Column 5, lines 30-42, 63-66, and Figures 6 and 9), and wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and directed to recording of information representing computer data (Column 2, lines 33-48, Column 5, lines 30-42, 63-66, Column 6, lines 13-65, and Figures 6 and 9) and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk and directed to the recording of information representing audio data (Column 1, lines 32-38 and Column 5, lines 30-42), and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode (Column 2, lines 33-48, Column 5, lines 30-42, 63-66, and Figures 6 and 9).

Regarding claim 50, Nakajo discloses wherein the step of providing a first strategy and a second strategy provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk

having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time (Figures 6 and 9).

Regarding claim 51, this claim recites limitations similar to those in claim 50 and is rejected for the reasons provided above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Arioka et al. (US PgPub 2003/0039191) disclose an optical recording medium and optical recording method. Nakajo (US 5,502,702) discloses an optical disc recording device using basic recording information and projection time

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control. Kimura et al. (US 6,192,017) disclose a method and apparatus for reducing the width of marks written in optical media. Miyamoto et al. (US 6,842,415) disclose an information recording method and apparatus with suppressed mark edge jitters.

Furumiya et al. (US PgPub 2003/0031108) discloses a method for recording/reproducing data on/from an optical disk.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627